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VII. — *Parmenides' Indebtedness to the Pythagoreans*

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THE works of Parmenides are preserved to us in two groups of fragments. In the first of these he professes to set forth the truth about things, in the second, men's opinions about things. Of his fidelity in adhering to these two divisions critics hold two ideas. (1) That "the 'human opinions' . . . were not simply reproduced, but were transformed" . . . making "the physical theory of Parmenides a dualism, a theory of opposites,"¹ thus linking him with Heraclitus and Anaximander. This view seems to be upheld by Aristotle² in the statement that Parmenides, while holding that the universe is one, maintained that there is not merely one cause but that two causes exist. (2) That "the false theory of the universe is not indeed represented as it is actually found with any of the previous philosophers, but as, according to the opinion of Parmenides, it ought to be expressed."³ . . . He represents the ordinary view of the world as he himself would regard it if he placed himself on that standpoint, but his design is not to expound his own opinions, but those of others; his whole physical theory . . . is designed to show us how the world of phenomena would present itself if we could regard it as a reality. But it is clear from the exposition that the world of phenomena can only be explained on the theory of two primitive elements . . . and therefore it is the more evident that the world of phenomena itself . . . has no claim to reality."

An examination of a few corresponding passages from the two parts of the poem reveals the fact that Parmenides often agrees in part with the opinions of other philosophers, but in any instance the 'opinion' either falls short of or exceeds his own claims:

¹ Windelband, *History of Ancient Philosophy*, p. 63.

² *Metaph.* 1, 3.

³ Zeller, *Pre-Socratic Philosophy*, 1, 607.

ON OPINION

1. μορφὰς γὰρ κατέθεντο δύο γνώμας ὀνομάζειν,
τῶν μίαν οὐ χρεὼν ἔστιν (ἐν ᾧ πεπλανήμενοι εἰσὶν) ·
τὰντία δ' ἐκρίναντο δέμας καὶ σήματ' ἔθεντο
χωρὶς ἀπ' ἀλλήλων, τῇ μὲν φλογὸς αἰθέριον πῦρ,
ἥπιον ὄν, μέγ' [ἄραιον] ἐλαφρόν, ἑωυτῷ πάντοσε τωυτόν,
τῷ δ' ἐτέρῳ μὴ τωυτόν · αὐτὰρ κάκεινο κατ' αὐτό
τὰντία νύκτ' ἄδαῃ, πυκινὸν δέμας ἐμβριθέες τε. (Frg. 8, 53-59.)
2. αἱ γὰρ στεινότεραι πλήντο πυρὸς ἀκρήτοιου,
αἱ δ' ἐπὶ ταῖς νυκτός, μετὰ δὲ φλογὸς ἵεται αἶσα ·
ἐν δὲ μέσῳ τούτων δαίμων ἢ πάντε κυβερνᾷ. (Frg. 12, 1-3.)
- 3α. ἐν δὲ μέσῳ τούτων δαίμων ἢ πάντα κυβερνᾷ ·
πάντα γὰρ (ἦ) στυγεροῖο τόκου καὶ μίξις ἄρχει
πέμπουσ' ἄρσενι θῆλυ μίγην τὸ τ' ἐναντίον αὐτῆς
ἄρσεν θηλυτέρῳ. (Frg. 12, 3-6.)
- 3β. . . . εἰδήσεις δὲ καὶ οὐρανὸν ἀμφὶς ἔχοντα
ἔνθεν [μὲν γὰρ] ἔφν τε καὶ ὥς μιν ἄγουσ(α)
ἐπέδρυσεν Ἀνάγκη
πείρατ' ἔχειν ἄστρων. (Frg. 10, 5-7.)
 πῶς γαῖα καὶ ἥλιος ἡδὲ σελήνη
αἰθήρ τε ξύνος γάλα τ' οὐράνιον καὶ ὄλυμπος
ἔσχατος ἡδ' ἄστρων θερμὸν μένος ὠρμήθησαν
γίγνεσθαι. (Frg. 11.)
4. ὥς γὰρ ἐκάστοτ' ἔχει κράσιν μελέων πολυπλάγκτων,
τὼς νόος ἀνθρώποισι παριστᾶται · τὸ γὰρ αὐτό
ἔστιν ὅπερ φρονέει μελέων φύσις ἀνθρώποισιν
καὶ πᾶσιν καὶ παντί · τὸ γὰρ πλέον ἔστι νόημα. (Frg. 16.)

ON OPINION

1. Two forms (principles) have been imagined by men. They are held to be of opposite nature. On the one hand is the ethereal flame of fire, mild, active, like itself throughout, and unlike the other. On the other hand is the unlit darkness, thick and heavy mass. (Frg. 8, 53-59.)

2. For the smaller circles are filled with unmixed fire, but those about them with darkness, and between is poured out a measure of fire. In the middle of these is the divinity who controls all. (Frg. 12, 1-3.)

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ON TRUTH

1. . . . τί δ' ἂν μιν καὶ χρέος ὦρσεν
ὑστερον ἢ πρόσθεν, τοῦ μηδενὸς ἀρξάμενον, φῶν;
οὕτως ἢ πάμπαν πέλεναι χρεῶν ἐστὶν ἢ οὐχί. (Fig. 8, 9-11.)

2. αὐτὰρ ἐπεὶ πείρας πύματον, τετελεσμένον ἐστὶ
πάντοθεν, εὐκύκλου σφαίρης ἐναλίγκιον ὄγκῳ,
μεσσοῦσθαι ἰσοπαλὲς πάντῃ. (Fig. 8, 42-44.)

- 3a. οὐδὲ ποτ' ἐκ μὴ ἐόντος ἐφήσει πίστιος ἰσχύς
γίγνεσθαι τι παρ' αὐτό· τοῦ εἵνεκεν οὔτε γενέσθαι
οὔτ' ὀλλυσθαι ἀνῆκε δίκη χαλάσασα πέδησιν,
ἀλλ' ἔχει. (Fig. 8, 12-15.)

- 3b. . . . κρατερὴ γὰρ Ἀνάγκη
πείρατος ἐν δεσμοῖσιν ἔχει, τό μιν ἀμφὶς ἔργει.
οὔνεκεν οὐκ ἀτελεύτητον τὸ ἐὼν θέμις εἶναι·
ἔστι γὰρ οὐκ ἐπιδενέες, [μὴ] ἐὼν δ' ἂν παντὸς ἐδείτο.
(Fig. 8, 30-33.)

4. χρὴ τὸ λέγειν τε νοεῖν τ' ἐὼν ἔμμεναι (Fig. 6, 1.)
ταῦτόν δ' ἐστὶ νοεῖν τε καὶ οὔνεκέν ἐστι νόημα.
οὐ γὰρ ἄνευ τοῦ ἐόντος, ἐν ᾧ πεφασισμένον ἐστίν,
εὐρήσεις τὸ νοεῖν. (Fig. 8, 34-36.)

ON TRUTH

1. And what necessity then would call it (being) forth, sooner or later to take its beginning and growth from nothing? Hence it must be either absolute or not at all. (Fig. 8, 9-11.)

2. But since there is a final limit, it (being) is on all sides complete, similar to the mass of a perfect sphere, all parts being equally distant from the centre. (Fig. 8, 42-44.)

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3a. And in the middle of these (circles) is the divinity who controls all; for she controls painful birth and union, sending female to join with male and again male to female. (Frg. 12, 3-6.)

3b. Thou shalt know also the all-embracing sky, whence it arose, and how necessity took it and chained it, so that there might be a limit to the stars.¹ (Frg. 10, 5-7.) How earth and sun and moon and milky way of heaven and loftiest Olympus and the glittering brightness of the stars began to be. (Frg. 11.)

4. For just as at all times it holds sway over his manifold mingled members, so the mind of man is constituted; for that which thinks is the nature of mingled parts in men, one and all, and the excess is thought. (Frg. 16.)

This comparison shows that in all the statements of any group there is an identical thought, but also that in each case the statement taken from the treatise on opinion contains a thought differentiated from that found in the corresponding statement in the treatise on truth. In the first group the common thought is that of the origin of being; the difference appears in that in the one no origin for being is recognized as possible, while in the other, two first principles are recognized in the creation of things. In the second group the common thought is that of the form and nature of being; the difference appears in that, in the one, being is complete, like the mass of a perfect sphere, while in the other it is like concentric circles, in the centre of which resides the divinity controlling all its changes. In the third group the common thought is that of limitation; the difference appears in the fact that in the one the divinity wraps cables about being to prevent change, while in the other, she presides over being to direct all genesis. Furthermore, on the one hand, being is represented as absolutely complete, lacking nothing and all-

¹ This use of *Ἀνάγκη* is ascribed to Philolaus as a doctrine of the Pythagoreans. (Diog. Laert. VIII, 55.) It is natural to identify this with the peripheral fire of the Pythagoreans, which forms for them the division between the limited and unlimited.

3a. And the force of the argument will not allow that from not-being anything but not-being can come. Wherefore Justice has not released creation and destruction from bonds, but holds them firm. (Frg. 8, 12-15.)

3b. For powerful necessity holds it (being) in the bonds of limitation which she draws about it. Therefore it must be that it is not incomplete. And it has no lack, for if it lacked anything it would lack everything. (Frg. 8, 30-33.)

4. It is necessary both to say and to think that being is (Frg. 6, 1); and that both thinking and that from which thought springs is one and the same thing, for thinking will not be found without being, in which it is expressed. (Frg. 8, 34-36.)

inclusive, while on the other, there is at least a suggestion of the unlimited outside the orderly universe. In the fourth group the common idea is the identity of thought and substance; the difference appears in that in the one case thought is identified with the external object; in the other with the excess essence in man.

This process continued reveals the fact that in any group where there are coincidences in doctrine the statements in the treatise on opinions make additions to, or introduce some entirely different theory from, that which he has recorded in the treatise on truth as his own belief. Those statements of opinion which coincide with his own views would of necessity be admitted by him as the truth. Here Parmenides, like many another sage, lays himself open to the criticism of embodying all truth in his own opinion of it, while the opinions of others are mere opinions. This is the precise point at which critics, including Aristotle, have differed in their interpretation of Parmenides. Now if we consider in and of itself any part of the treatise on opinions as Parmenides' own view, then we may consider it all as his. But it contains obvious inconsistencies and contradictions and cannot well be so considered.

If, now, we accept as his individual views only those that

are set down in the discourse on truth, we are confronted with the following statements in regard to being :

. . . ταύτη δ' ἐπὶ σηματ' ἔασι
πολλὰ μάλ' ὥς ἀγένητον ἔον καὶ ἀνώλεθρόν ἐστιν
οὐλον μονογενές τε καὶ ἀτρεμές ἥδ' ἀτέλεστον ·
οὐδέ ποτ' ἦν οὐδ' ἔσται, ἐπεὶ νῦν ἐστιν ὁμοῦ πάν,
ἔν, συνεχές · (Frg. 8, 2-6.)

again :

αὐτὰρ ἐπεὶ πείρας πύμματον, τετελεσμένον ἐστὶ
πάντοθεν, εὐκύκλου σφαίρης ἐναλίγκιον ὄγκῳ,
μεσσόθεν ἰσοπαλὲς πάντῃ · τὸ γὰρ οὔτε τι μείζον
οὔτι τι βαιότερον πέλεναι χρεόν ἐστι τῇ ἢ τῇ. (Frg. 8, 42-45.)

Other words used to describe being are :

πῶς . . . πέλοι τὸ ἐόν ; πῶς . . . γένοιτο ; (Frg. 8, 19.)

τὼς γένεσις μὲν ἀπέσβεσται καὶ ἄπυστος ὀλεθρος
οὐδὲ διαιρετόν ἐστιν, ἐπεὶ πᾶν ἐστιν ὁμοῖον ·
οὐδέ τι τῇ μᾶλλον, τό κεν εἴργοι μιν συνέχεσθαι,
οὐδέ τι χειρότερον, πᾶν δ' ἔμπλεον ἐστιν ἐόντος.
τῷ συνεχές πᾶν ἐστιν · ἐόν γὰρ ἐόντι πελάζει. (Frg. 8, 21-25.)

αὐτὰρ ἀκίνητον μεγάλων ἐν πείρασι δεσμῶν
ἐστιν ἀναρχον ἄπαυστον, ἐπεὶ γένεσις καὶ ὀλεθρος
τῇλε μάλ' ἐπλάχθεσαν, ἀπῶσε δὲ πίστις ἀληθής.
ταῦτόν τ' ἐν ταῦτῳ τε μένον καθ' ἑαυτό τε κείται
χοῦτως ἔμπεδον αἰθερὶ μένει · (Frg. 8, 26-30.)

And upon this path there are many signs that being is unbegotten and indestructible, universal, alone-begotten, immovable, and unending ; nor was it ever, nor will it be since it now is all together, one and inseparable. (Frg. 8, 2-6.)

But since there is an outermost limit, it is absolutely complete, like the mass of a perfect sphere, equally distant from the centre on all sides. It must needs not be greater nor less anywhere at all. (Frg. 8, 42-45.)

How, then, could being come into existence? how be created? (Frg. 8, 19.)

Thus creation is extinguished and destruction is a lie. Neither is it (being) divisible, since it is all alike. Nor is there anything in excess in it that could hinder its holding together, nor anything less, for all is full of being. Hence the all is continuous and being impinges on being. (Frg. 8, 21-25.)

Moreover, it is unmoved, held in the bonds of heavy chains, is without beginning and unending, since creation and destruction are cast away whither true belief has driven them. It abides the same in itself and alone by itself; and thus it remains there fixed. (Frg. 8, 26-30.)

From these and other passages we gather that he taught a oneness of being which is uncreated, unbegotten, alone-begotten, whole, unmoved, unending, indestructible, homogeneous, continuous, contiguous, that it abides in one position, is held in chains by Necessity, Justice, or Fate, is indivisible, has always been as it is, and never can be any different. Here it may be objected that Parmenides, while urging the one great theme of his life, 'Being Is,' and insisting upon the unity of being, is only restating the theory of unity as set forth by Xenophanes. But this is only apparent. Xenophanes' position is this: "God is one, supreme among gods and men, and not like man either in mass or mind" (Frg. 23);¹ "the whole of God sees, thinks, hears (24); yet without effort he swings all things by the power of his mind (25); being always abides in the same place and cannot consistently move to any other place (26); and all things which come into being and develop are earth and water" (29, 33). In contrast to this, Parmenides provides for no controlling agency except Necessity, Justice, or Fate, and she exercises only the power of limitation; and since he admits no change, no creation, no destruction, of necessity he provides no original substance from which things issue and into which they return. Thus the characteristics which Xenophanes ascribes to God Parmenides ascribes to being. It therefore seems plain that, while they both admit being, Parmenides denies

¹ The Doxographist (565) adds: *φησὶ* (Xenophanes) *δὲ καὶ τὸν θεὸν εἶναι . . . καὶ πεπερασμένον καὶ σφαιροειδῆ καὶ πᾶσι τοῖς μορίοις αἰσθητικόν.*

the possibility of change and creation, but Xenophanes makes use of the controlling agency as the motive power, and earth and water as the cosmic substances in all creation and dissolution.

This well may be the explanation of Aristotle's position in ascribing these views of Xenophanes to his pupil Parmenides, that he did not clearly distinguish between the teachings of master and pupil on this point.

Again, it may be urged that Parmenides, opposed as he was to the postulate of Heraclitus that only change is unchanging, in setting forth his own doctrine of being had only in mind the overthrow of Heraclitus. This has in it some measure of truth. But in forming a positive content for his theory Parmenides hit upon the idea of unity, which, though Heraclitus mentions it once in the extant fragments,¹ can hardly be said to belong to Heraclitus in any likeness to the unity set forth by Parmenides. His system, then, is more than a restatement of Xenophanes' theory of being plus a denial of Heraclitus' flux.

Now if we compare the known views of Parmenides with the known views of the Pythagoreans on the same subjects, we can trace a more notable resemblance. In the first place, it is agreed² on all sides that Parmenides was familiar with the Pythagoreans and with their doctrines; and furthermore that his astronomical views are so nearly in accord with theirs that they must have emanated from the master of Crotona. But the dependence of his cosmological and ontological views are not so apparent, and have not been commonly referred for their origin to the teachings of the Pythagoreans. We may consider, then, these two spheres.

Some³ have seen Parmenides' explanation of the universe in the Pythagorean table of contraries. And it may be that

¹ Heraclitus, Frg. 50. The whole question of Parmenides' relation to Heraclitus is thoroughly discussed by Professor Shorey in a review of Patin's 'Parmenides im Kampfe gegen Heraklit,' *A.J.P.* xxi, 200-216.

² Diog. Laert. ix, 21; Strabo, xxvii, i, 1. Cf. Windelband, *Hist. Anc. Phil.* p. 64.

³ Cf. Gomperz, *Greek Thinkers*, i, 165-183.

that contribution to knowledge had been made at that time, but it has almost no resemblance to the unity of Parmenides. It is itself diversity, and would seem to have been a later development of that school.¹ At all events, Aristotle states² that Plato and the Pythagoreans in their respective ways explained the universe and answered the problem of being and becoming on the principle of numbers. And almost the only reference Aristotle makes³ to Pythagoras himself ascribes to that philosopher the attempt to evaluate moral principles on a numerical basis. Now while it is agreed that Pythagoras and his early followers were primarily interested in religious rather than metaphysical speculations, yet we must conclude that at least as early as the time of Parmenides some advance had been made by them in the matter of accounting in terms of numbers for the universe and man's relation to it, as well as in the matter of man's relation to man.

The idea of a sphere held in rigid bonds by necessity is quite similar, as an explanation of the universe, to the idea of concentric circles in the centre of which resides the "central fire." Yet these figures have more than an astronomical significance. In the one case, Parmenides undertakes to banish genesis and dissolution by wrapping cables about the universe; in the other, the Pythagoreans use a developed unity as the agency governing further development. These are to be considered their respective views of the cosmos. So Parmenides' position seems to be one of antagonism to the Pythagorean idea of variety, motion, and change. His postulates clearly seem to indicate this. He says of being that it is universal, alone-begotten, without motion (*οὐλον, μουννογενές, ἀτρεμές*). Thus, while he does not accept the Pythagorean explanation of the *modus operandi* of the divinity, yet he does make use of a divinity which exercises an arbitrary control over a static universe.

This brings us to consider the relation between the Pythagoreans and Parmenides on the problem of becoming. First of all, let us see clearly what Parmenides has said. In the treatise on truth he denies all creation. He claims that

¹ Cf. Zeller, *Pre-Soc. Phil.* 1, 381.

² *Metaph.* 1, 6.

³ *Moralia*, 1, 1, 6.

being, homogeneous, equably distributed, unmoved, and immovable, is unbegotten, alone-begotten, indestructible (*ἀγένετον, μουννογενές, ἀνώλεθρον*).¹ In other words, there never was any beginning of being, there never has been and never can be any change in it, and it never can perish. Moreover, he argues, there is nothing from which it could have been derived, for not-being is non-existent and unthinkable; and, granting that it had existence, nothing but not-being could issue from it. But it is in the doctrine of limitation that Parmenides comes in direct contact with the teachings of the Pythagoreans. When he admits that there must be an outermost limit to being (*αὐτὰρ ἐπεὶ πείρας πύματον τετελεσμένον ἐστὶ πάντοθεν*),² he is simply stating a principle of Pythagorean ontology. His own words even go to show that a condition of unlimited being was lurking in his mind. For instance, the word *μουννογενές*, alone-begotten, seems to point to the idea of becoming; and the very statement (*τοῦ εἵνεκεν οὔτε γενέσθαι οὔτ' ὄλλυσθαι ἀνήκε δίκη χαλάσασα πέδησιν, ἀλλ' ἔχει*)³ shows a residuum of thought that without the restraint of Justice creation and dissolution would be rife; and the statement⁴ — so genesis is extinguished and destruction is incredible (*γένεσις μὲν ἀπέσβεσται καὶ ἄπυστος ὄλεθρος*) — points to the refutation of a prevalent doctrine.

How far the idea of unlimited being and of change in matter to account for phenomena was ever accepted by Parmenides is now difficult to determine. The fact of variety, motion, and change seems to be constantly in his mind as a thing to be combated. But Aristotle gives no uncertain account of Parmenides' explanation of objectivity. He says: "But under the necessity of accounting for phenomena and conceiving that there is unity according to reason but diversity according to sense, he again posited two causes and two first principles, heat and cold, fire and earth, considering heat as being, its opposite as not-being."⁵ And again: "Parmenides seems to have touched upon unity according to reason . . . wherefore he said that it is limited."⁶

¹ Frg. 8, 3-4.² Frg. 8, 42 seq.³ Frg. 8, 12-15.⁴ Frg. 8, 21.⁵ Arist. *Metaph.* 1, 5, 11; 1, 3, 11; *Phys.* 1, 5.⁶ *Metaph.* 1, 5, 10.

Now with the Pythagoreans number through limitation is at once the first principle and the matter in things, and their conditions and states.¹ This number also is unity, composed of odd and even, of which the former is finite, the latter infinite. Unity is the origin of number and the whole heaven is numbers.¹ Moreover, objective realities are manifestations of the pure mathematical number,² and unities have quantity. The 'one' arises from the union of the unlimited even and the limited odd which are the elements (*στοιχεῖα*) of number, and number arises from the 'one.' But what are these elements and how were they organized? At this point we are again indebted to Aristotle. He says:³ "The Pythagoreans do not mention the genesis of the odd, since it is plain that there is a genesis of the even. And some derive the first even from odds that are made even by the addition of the large and small." Now since evens can be produced from odds only by adding odds to odds, it would appear that the original unformed numerical elements were odds. Then combining the greater and smaller odds, evens are derived. And unit number, τὸ ἕν, μονάς, is composed of both the original odd and derived even, since, as they claim, it is both.⁴ This unity when once established becomes the basis and the moving spirit for the formation of all other numbers.

Now if we return again and trace the formation of the universe from the beginning, we start with chaos represented by unformed number. This seems to have taken an objective form with them so that, previous to the development of the first unity, the original odds must have assumed a more or less positive content. But no real substantial object as yet was formed. Now by the process of uniting the larger and smaller of these originals another relation appears, viz., even. The next step in the process is the union of the original odd and the derived even, producing the first unity. Down to this point the theory of numbers is the theory of the universe. From this point the theories identical in process diverge in content. That is, this unity considered in the

¹ Id. I, 5, 5.² Id. XII, 6.³ Id. XIII, 4.⁴ Id. XIII, 6, 7.

pure mathematical sense establishes the possibility of formation for all other numbers, and this unity considered as the first objective reality, identified as the 'central fire,' becomes the centre of action and of authority, is the beginning of objective creation, and controls the orderly setting in array of the destined universe. Beyond this finite number and beyond this orderly universe unformed number still reigns. The active agent in the genesis both of number and of the cosmos was limitation (*τὸ πέρας*).

Now let us return to Parmenides. As we have seen, he provides for a universe and a limited universe. The only difference, too, between his and the Pythagorean universe is found in the nature of this limitation. With the Pythagoreans it is self-imposed. We must infer in it some inherent force characteristic of the unformed elements numerical and cosmical. This is plainly manifest in the power which the first unity, once formed, exerts in the evolution of subsequent unities. But Parmenides' limitation is one imposed by necessity, justice, or fate, — an arbitrary, hard, and fast limitation imposed by an outside power. The words used and the ideas expressed show that in the mere matter of limitation he is at one with the Pythagoreans, and that in the functions of the power exercising that limitation Parmenides' theory is a denial of a prevalent belief, — a belief bearing close resemblance to that of the Pythagoreans.

A close examination of all the "opinions" shows that they, even more than his statements of "truth," relate to the doctrines ascribed to the Pythagoreans. There is scarcely a tenet set forth in the "opinions" which may not be referred directly or indirectly to them as they are represented in Aristotle. Not more than ten different propositions exist in this part of his work. Of these, two deal with first principles, three deal with astronomical truths, three have an astro-physical significance, one deals with procreation, and one with the nature of thought. The six dealing with astronomical or astro-physical theories undoubtedly have reference to the Pythagoreans. Of the two referring to first principles one seems to have resemblance to Anaximander, and the other to the dual principle

of the Pythagoreans. To the theory of right and left in procreation corresponds indirectly the Pythagorean idea of right and left as two first principles. To the postulate that "that which thinks is the nature of mingled parts in man and the excess is thought" there is no parallel in the Pythagorean doctrine. But Parmenides' own postulate on this point that "thinking will not be found without being, in which it is expressed" corresponds in substance to the belief of the Pythagoreans that soul and mind are properties of number (being), though Parmenides makes no mention of this Pythagorean symbol.

Thus it appears that the "opinions" of Parmenides, with few exceptions, bear resemblance to no other system so much as to that of the early Pythagoreans. The only obstacle in the way of this interpretation is that of chronology. Since Philolaus was the first literary exponent of the Pythagorean teachings, it has been customary to make him the intellectual editor of their works as well. So the quite universal practice has been to deny to the Pythagoreans before his time all metaphysical teachings. But this position is difficult to maintain. Besides, it is very questionable whether more than a single generation, if that much, elapsed between the appearance of Parmenides' poem and the ascendancy of Philolaus. So that the crystallized thought of the Pythagoreans at the time of Philolaus cannot have been radically different from what it was at the time of Parmenides. It is agreed on all sides that the metaphysical number theory was in vogue at the time of Philolaus. Now Aristotle, as we have seen, ascribes to some of the Pythagoreans at least a number theory involving metaphysical speculations. The real question, then, is how early can these statements of Aristotle apply to them. A number theory employed in the explanation of moral values is ascribed by the Stagirite to Pythagoras himself. If this is true, it shows that there was a number theory before 500 B.C. It is also very probable that the explanation of soul, mind, opportunity, and justice on the numerical basis was established by Pythagoras. These speculations were accentuated by studies into mathematics, music, and mystery. How long it would

take to pass to metaphysical speculations cannot be said. It is quite likely that at least two generations, perhaps more, passed between the ascendancy of Pythagoras and that of Parmenides. It is by no means impossible that men like Pythagoras, of acute abilities, developed a metaphysical theory of the universe, and that at least in incipient form, or as an esoteric doctrine, it was in existence in the time of Parmenides. This is all the more probable since they early became interested particularly in astronomy.

The fact that Parmenides does not specifically mention the number theory cannot be regarded as proof that it had not been developed. He does not mention in any of the extant fragments their ethical and moral science which Aristotle expressly states was developed by Pythagoras on the basis of number, and which must have antedated Parmenides by at least fifty years.

Furthermore, it is altogether unlikely that there then lived any now unknown philosopher to whom in particular these "opinions" might be referred. Such a thinker would have received recognition in Aristotle.

The course that offers least difficulty is to set as early as the time of Parmenides that amount of the metaphysical theory of the Pythagoreans which obviously corresponds to the "opinions" of Parmenides.

It seems evident, then, from this study (1) that the "opinions" of Parmenides refer in large part to the doctrines of the early Pythagoreans; (2) that his treatise on "truth" is largely concerned with a refutation of their arguments; (3) that not only his astronomical views but also his cosmological and ontological views generally were affected by the Pythagorean system; (4) that no violence to fact is done in setting the elementary metaphysical number theory of the Pythagoreans as early in time as the ascendancy of Parmenides.